

REMARKS

This Amendment is submitted in response to an Office action dated January 30, 2004, the shortened statutory period for response having expired on April 30, 2004.

Accordingly, a Petition and Fee for Extension of Time are included herewith.

I. Status of the Claims

The Examiner rejected all 24 pending claims in the office action mailed on January 30, 2004.

By this amendment, claims 4-6, 9, 14, 17-19, and 24 are amended to correct matters of form or grammar, and/or to more particularly point out the invention for which protection is sought. Claims 1-3, 7-8, 11-13, 15-16, and 22-23 are canceled without prejudice. Consequently, claims 4-6, 9, 14, 17-19, 21, and 24 are now pending.

II. Rejections Under 35 U.S.C. § 102

The Examiner rejected claims 4, 9, 18, and 19 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent Application Pub. No. US 2002/0044699 A1 to Kozuka ("Kozuka"). See Office action at ¶ 2. Applicant respectfully traverses these rejections.

Claim 4 is directed to a selectable resolution image system comprising an imager having a plurality of photocells, a circuit that converts the electrical responses of the plurality of photocells into digital signals, the circuit having a full-resolution mode and a low-resolution mode, and an image processor that operates the circuit, where the circuit, in the low-resolution mode, combines the electrical responses of groups comprising four contiguous photocells together and converts each group of combined electrical responses into a corresponding digital signal.

Applicant respectfully submits that Kozuka fails to disclose combining the electrical responses of groups comprising four contiguous photocells together. Kozuka, and in particular the portion cited by the Examiner, discloses adding outputs from pixels located on two adjacent chips during the low-resolution mode. *See* Kozuka at ¶ 75. Hence Kozuka cannot be said to disclose combining the electrical responses of groups comprising four contiguous cells as recited in claim 4.

Claim 9 is directed to a selectable resolution image capture system comprising an imager having a plurality of photocells that produce an analog electrical response to light exposure, a circuit that converts the electrical responses of the plurality of photocells into digital signals, the circuit having a full-resolution mode and a low-resolution mode, and an image processor that operates the circuit, wherein the imager is a color imager having a plurality of red, green, and blue photocells producing electrical responses to red, green, and blue light, respectively.

Applicant respectfully submits that Kozuka fails to disclose a color imager having a plurality of red, green, and blue photocells producing electrical responses to red, green, and blue light, respectively. Kozuka, and in particular the portion cited by the Examiner, merely discloses an image reading unit that receives light from red, green, and blue LED light sources. *See* Kozuka at ¶ 99. Therefore, Kozuka cannot be said to disclose a color imager having a plurality of red, green, and blue photocells as recited in claim 9.

Claim 18 is directed to a method of capturing an image comprising selecting between a low-resolution mode and a high-resolution mode, exposing an array of photocells that produce electrical charges in response to light exposure to light, and if the high-resolution mode is selected, then converting each electrical charge into a digital signal to produce a high-

resolution image, else, separating the array of photocells into discrete groups each comprising four adjoining photocells, combining the electrical charges of each group's photocells together, and converting each group's combined electrical charges into a digital signal.

Applicant respectfully submits that Kozuka fails to disclose a method of capturing an image comprising separating the array of photocells into discrete groups each comprising four adjoining photocells when the high-resolution mode is not selected. Kozuka, and in particular the portion cited by the Examiner, discloses adding outputs from pixels located on two adjacent chips during the low-resolution mode. *See* Kozuka at ¶ 75. Hence Kozuka cannot be said to disclose separating the array of photocells into discrete groups each comprising four adjoining photocells as recited in claim 18.

Claim 19 is directed to a method of capturing an image comprising selecting between a low-resolution mode and a high-resolution mode, exposing an array of photocells that produce electrical charges in response to light exposure to light, and if the high-resolution mode is selected, then converting each electrical charge into a digital signal to produce a high-resolution image, else, separating the array of photocells into discrete groups each having at least two photocells, combining the electrical charges of each group's photocells together, and converting each group's combined electrical charges into a digital signal, where the array of photocells comprise red, green, and blue photocells that produce electrical charges corresponding to red, green, and blue light, respectively.

Applicant respectfully submits that Kozuka fails to disclose an array of photocells that produce electrical charges in response to light exposure to light where the array of photocells comprise red, green, and blue photocells that produce electrical charges corresponding to red, green, and blue light, respectively. Kozuka, and in particular the portion cited by the Examiner,

merely discloses an image reading unit that receives light from red, green, and blue LED light sources. *See* Kozuka at ¶ 99. Therefore, Kozuka cannot be said to disclose an array of photocells comprise red, green, and blue photocells that produce electrical charges corresponding to red, green, and blue light, respectively as recited in claim 19.

IV. Rejections Under 35 U.S.C. § 103(a)

A. Claims 5, 14, and 24 – over Kozuka in view of Palcic et al.

The Examiner has rejected claims 5, 14, and 24 under 35 U.S.C. § 103(a) as being unpatentable over Kozuka in view of U.S. Patent No. 5,827,190 to Palcic et al. (“Palcic et al.”). *See* Office action at ¶ 7. Applicant respectfully traverses these rejections.

Claim 5 is directed to a selectable resolution image capture system comprising an imager having a plurality of photocells, a circuit that converts the electrical responses of the plurality of photocells, the circuit having a full-resolution mode and a low-resolution mode, and an image processor that operates the circuit and selects between the full-resolution and low-resolution modes of the circuit to capture an image, where the image processor detects whether there is a low light condition, and if so, captures the image using the low-resolution mode of the circuit.

With respect to claim 5, the Examiner stated that although Kozuka does not, Palcic et al. teaches the limitation “where the image processor detects whether there is a low light condition, and if so, captures the image using the low-resolution mode of the circuit.” Applicant respectfully submits that Palcic et al. merely discloses that the light sensitivity of its imaging sensing means can be varied. *See* Palcic et al., at col. 4, lines 8-11. Palcic et al. therefore fails to disclose or suggest an image processor that detects whether there is a low light

or any lighting condition, or a means for detecting lighting conditions. Thus Kozuka and Palcic et al., either alone or in combination, do not disclose or suggest the claimed invention of claim 5.

With regard to claims 14 and 24, the Examiner stated that they are rejected on the same grounds as the ones cited for rejecting claim 5. For the same reasons Applicant stated with respect to claim 5, Applicant respectfully submits that Kozuka and Palcic et al., either alone or in combination, do not disclose or suggest the claimed invention of claims 14 or 24 as well.

B. Claims 6 and 17 – over Kozuka in view of Kuroiwa

The Examiner has rejected claims 6 and 17 under 35 U.S.C. § 103(a) as being unpatentable over Kozuka in view of U.S. Patent Application Pub. No. US 2001/0017658 A1 to Kuroiwa (“Kuroiwa”). *See* Office action at ¶ 7. Applicant respectfully traverses these rejections.

Claim 6 is directed to a selectable resolution image capture system comprising an imager having a plurality of photocells, a circuit that converts the electrical responses of the plurality of photocells, the circuit having a full-resolution mode and a low-resolution mode, and an image processor that operates the circuit and selects between the full-resolution and low-resolution modes of the circuit to capture an image, where the image processor detects whether there is a low power condition, and if so, captures the image using the low-resolution mode of the circuit.

With respect to claim 6, the Examiner stated that Kozuka does not, but Kuroiwa does, teach the limitation “where the image processor detects whether there is a low power condition, and if so, captures the image using the low-resolution mode of the circuit.” However, Kuroiwa does not disclose or suggest an image processor that detects whether there is a low power condition. Kuroiwa merely teaches that its invention can reduce power consumption by

reducing the rate of reading out signals by lowering the resolution as a result of its subsampling. Similarly, Kuroiwa does not disclose or suggest detecting power conditions and selecting the low-resolution mode if insufficient power is available. Thus Kozuka and Kuroiwa, either alone or in combination, do not disclose or suggest the claimed invention of claim 7.

With regard to claim 17, the Examiner stated that it is rejected on the same grounds as the ones cited for rejecting claim 6. For the same reasons Applicant stated with respect to claim 5, Applicant respectfully submits that Kozuka and Kuroiwa, either alone or in combination, do not disclose or suggest the claimed invention of claim 17 as well.

C. Claim 21 – over Kozuka in view of Lin et al. and Tse

The Examiner has rejected claim 21 under 35 U.S.C. § 103(a) as being unpatentable over Kozuka in view of U.S. Patent No. 6,642,962 to Lin et al. (“Lin et al.”) and further in view of U.S. Patent No. 5,477,345 to Tse (“Tse”). *See* Office action at ¶ 9. Applicant respectfully traverses this rejection.

Claim 21 is directed to the method of claim 19, *see supra*, where the array of photocells are arranged in rows and columns with alternating patterns of red, green, red, green, and green, blue, green, blue, and where each group of photocells comprises four photocells that are responsive to the same color of light. The Examiner stated that Kozuka and Lin et al. do not teach the limitation “where each group comprises four photocells that are responsive to the same color of light.” However, the cited portion of Tse merely teaches the chroma subsampling of a four-pixel area that happens to be of one color. *See* Tse, at col. 9, lines 23-25. These pixels in Tse have not been separated into discrete groups from an array of photocells arranged in rows and columns with alternating patterns of red, green, red, green, and green, blue, green, blue. *See* Tse, at Fig. 2. In other words, the grouping of four pixels disclosed in Tse is completely

different from the grouping of four pixels in the claimed invention. *Compare* present specification at page 14, second paragraph. Furthermore, there is no motivation to combine Kozuka, Lin et al., and Tse to come up with the claimed invention of claim 21. Thus Kozuka, Lin et al., and Tse, either alone or in combination, do not disclose or suggest the claimed invention of claim 21.

D. Claims 10 and 20

The Examiner also rejected claims 10 and 20 under 35 U.S.C. § 103(a) as being unpatentable, respectively, over Kozuka in view of Tse, and over Kozuka in view of Lin et al. *See* Office action at ¶¶ 8 & 10. Applicant respectfully submits that since both claims 10 and 20 depend on a claim that is allowable as discussed above, claims 10 and 20 are also allowable.

V. Conclusion

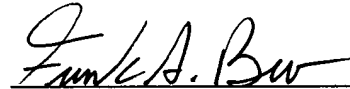
Applicant requests reconsideration of the present application in view of the aforementioned amendments and remarks. Although other features of the claims in the present application are also significant, Applicant respectfully submits that the pending claims are allowable for at least the aforementioned reasons. Accordingly, Applicant respectfully requests that the rejections under §§ 102(e) and 103(a) be withdrawn, and that the pending claims be allowed.

In the event that a telephone conference would advance examination of this application, the Examiner is invited to contact the undersigned at the number provided.

VI. Authorization

Applicant respectfully submits herewith a Petition for Extension of Time (3 months), and a check in the amount of \$950. In the event that the Commissioner determines that an additional extension of time or additional fee is due for this paper, the undersigned hereby petitions for any required extension of time, and authorizes the Commissioner to charge any fee required to Milbank's deposit account no. 13-3250, order no. 37213-02900. A DUPLICATE COPY OF THIS PAGE IS ENCLOSED HEREWITH.

Respectfully submitted,
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